UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,190	07/11/2003	Vasudha Ramnath	212/498	4287

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EXAMINER
SALL, EL HADJI MALICK

ART UNIT	PAPER NUMBER
2157	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

		Application No.	Applicant(s)
		10/618,190	RAMNATH ET AL.
Office Action Summary		Examiner	Art Unit	
		El Hadji M. Sall	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>11 July 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>07/11/03</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1.   This action is responsive to the application filed on July 11, 2003. Claims 1-20

are pending. Claims 1-20 represent method and system for enabling data to be stored

in a computer network; a method and a system for storing data in a computer network..

2.   *Claim Rejections - 35 USC § 102*

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent

by another filed in the United States before the invention thereof by the applicant

for patent, or on an international application by another who has fulfilled the

requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before

the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior

to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3.   Claims 1-20 are rejected under 35 U.S.C. 102(e) as being unpatentable over

Karol U.S. 6,628,617.

Karol teaches the invention as claimed including technique for internetworking

traffic on connectionless and connection-oriented networks (see abstract).

As to claims 1, 10, 16 and 18, Karol teaches a method and a system for enabling

storage of data in a computer network comprising a plurality of computer nodes,

wherein each computer node comprises at least one connection oriented link layer unit,

the method comprising the steps of:

defining a looping path in the computer network, wherein the looping path

comprises a plurality of computer nodes and connections between the computer nodes

(figure 1); and

configuring a connection unit at each node along the looping path, the connection

unit being supported by the connection oriented link layer unit (column 3, lines 58-66),

such that the connection oriented link layer unit at each computer node is able to

send incoming data which is to be stored in the computer network to a next computer

node along the looping path based on the connection unit, thereby providing the looping

path for data to be circulated therein, and thereby enabling the storage of data in the

computer network (figure 4).

As to claims 2 and 11, Karol teaches the method for enabling the storage of data

in a computer network according to claim 1, wherein the connection oriented link layer

unit is implemented according to a generalized Multi-protocol Label Switching

specification (column 2, line 52).

As to claim 3, Karol teaches the method for enabling the storage of data in a

computer network according to claim 1, wherein a signaling framework is supported by

the connection oriented link layer unit at each computer node and is implemented by a

signaling protocol running on the nodes (column 5, line 66 to column 6, line 2).

As to claim 4, Karol teaches the method for enabling the storage of data in a

computer network according to claim 3, wherein the connection unit at each computer

node of the computer network is configured by a signaling message generated by the

signaling protocol running on the computer nodes of the computer network (column 2,

lines 45-51; column 3, lines 58-66).

As to claim 5, Karol teaches the method for enabling the storage of data in a

computer network according to claim 1, further comprising the step of setting an

attribute of the connection unit at each computer node of the looping path, wherein the

attribute of the connection unit is used to identify the created path as a looping path for storing data (column 19, lines 25-35).

As to claim 6, Karol teaches the method for enabling the storage of data in a computer network according to claim 5, wherein the attribute of the connection unit at each computer node of the looping path is set by a signaling message generated by a signaling protocol running on the computer nodes of the computer network (column 2, lines 45-51).

As to claim 7, Karol teaches the method for enabling the storage of data in a computer network according to claim 6, further comprising steps of identifying the looping path in the computer network by determining whether an attribute of the signaling message is set (column 2, lines 45-51); and

preventing the identified looping path from being aborted by the signaling protocol running on the computer nodes of the computer network when the attribute of the signaling message is set to the predefined value (column 4, lines 20-24).

As to claims 8, Karol teaches the method for enabling the storage of data in a computer network according to claim 7, wherein a further attribute of the signaling message having a value which is being incremented at each computer node along the looping path is set to a predefined value at least a predefined computer node of the looping path (column 10, lines 3-15).

As to claim 9, Karol teaches the method for enabling the storage of data in a computer network according to claim 7, wherein a further attribute of the signaling message having a node identifier of each computer node being added to it at the respective computer node of the looping path is set to a predefined value at least a predefined node of the looping path (column 10, lines 3-15).

As to claim 12, Karol teaches the method for storing data in a computer network according to claim 10, further comprising the steps of:

affixing a header to each data packet of the data to be injected into the identified looping path at the node, wherein the header is associated with the identified looping path (column 6, lines 40-50);

determining a forwarding path information of the header affixed to the data packet by the connection oriented link layer unit at the computer node (figure 5); and

affixing further a connection oriented link layer header to the data packet affixed with the header by the connection oriented link layer unit at the computer node, wherein the connection oriented link layer header comprises an outgoing label which maps the data packet into the identified looping path, thereby storing the data in the computer network (figure 5).

As to claim 13, Karol teaches the method for storing data in a computer network according to claim 12, wherein a time to live field of the connection oriented link layer

header having a value which is being decremented at each computer node is set to a predefined value by the unit at least one computer node along the identified looping path (column 10, lines 3-15).

As to claim 14, Karol teaches the method for storing data in a computer network according to claim 10, wherein data stored in the looping path of the computer network is removed by setting an administrative bit in a signaling message generated by a signaling protocol running on the computer nodes of the computer network to a predefined value (column 6, lines 38-40); and

sending the signaling message to a computer node along the looping path, thereby setting an administrative attribute of a connection unit at the computer node and causing the computer node to remove the data stored in the looping path of the computer network (column 6, lines 44-50).

As to claim 15, Karol teaches the method for storing data in a computer network according to claim 10, wherein data stored in the looping path of the computer network is read by sending an experimental message generated by a signaling protocol running on the computer nodes of the computer network to a computer node along the looping path, thereby setting a duplicate attribute of a connection unit at the computer node and causing the computer node to duplicate the data stored in the looping path of the computer network (column 10, lines 51-67).

As to claim 17, Karol teaches the system for enabling storage of data in a computer network according to claim 16, wherein the connections between computer nodes are optical fibers (column 6, lines 7-10).

As to claim 19, Karol teaches a system for storing of data in a computer network according to claim 18, each computer node further comprises a removal unit for removing the injected data in the looping path when an administrative attribute of a connection unit is set, thereby causing the computer node to remove the data stored in the looping path of the computer network (column 6, lines 38-50)

As to claim 20, Karol teaches a system for storing of data in a computer network according to claim 18, each computer node further comprises a retrieval unit for duplicating the injected data in the looping path when a duplicate attribute of a connection unit is set, thereby causing the computer node to retrieve the data stored in the looping path of the computer network (column 10, lines 51-67).

4.   *Citation of Relevant Prior Art*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art: 6,633,544; 6,711,152.

5.   *Conclusion*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to El Hadji M Sall whose telephone number is 571-

272-4010. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-4010.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

El Hadji Sall
Patent Examiner
Art Unit: 2157